

China's Capability to Fight a Regional War under Informatization Conditions: A Practical Assessment

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Introduction

Since the early 1990s, Chinese strategists have emphasized the doctrine of Limited War under High-tech Conditions, changed in 2004 to Local War under Informatization Conditions. However, despite the tremendous progress the People's Liberation Army (PLA) has made during the last two decades, serious doubts still exist regarding its modernization process, and more specifically its capability to implement its military doctrine. These doubts are driven by two sets of questions. The first, as often discussed by practitioners and academicians, is to what extent has China bridged the wide gap between the doctrine's requirements and the PLA's operational, technological, organizational, and disciplinary weaknesses. The second topic attracts less attention: to what extent are China's military doctrine and modernization aimed at and relevant for different scenarios? Do China's doctrine and military buildup aim at outdated military forces as well as at advanced militaries? Are they relevant for both defensive and offensive wars? Will they be applied both in limited operations and in full-scale war?

Regional wars are suitable test case. For one thing, these bring together a variety of capabilities, arms and services that must operate harmoniously in accordance with the military doctrine's guidelines. For another, unlike a total war against a superpower, in a regional war China may face an equal or an inferior rival, against which it can use more traditional war-fighting methods, such as flooding the frontline with masses of soldiers. In other words, any assessment of the PLA's conduct of a regional war under informatization conditions should deal not only with the PLA's capability to acquire, assimilate and operate the

relevant means, but also with the Chinese leadership's will, given the alternatives, to do so.

Before presenting the paper's structure, its analytical framework is defined. Reference is made here to armed conflicts that include at least three services (ground, air, ballistic missiles and naval forces when relevant), in a force structure of at least two Group Armies.¹ Nor does the paper refer specifically to any rival or front, since no dispute that China is now directly or indirectly involved in, including territorial disputes and its growing concern over non-traditional threats, seem severe enough to provoke a war in the near future. Even the conflict with Taiwan seems to be at one of its lowest points ever.²

The first section of the paper introduces the basic elements of a regional war under informatization conditions, alongside their direct and indirect implications. The second section briefly presents the PLA's current abilities to assimilate the doctrine guidelines. The third and largest section explores China's willingness and ability to bear the military, economic and political costs that a regional war under informatization conditions may demand, in view of the alternatives.

1 The military force of two Group Armies is the minimal force structure to conduct a large-scale operation. See: Larry M. Wortzel, «PLA Command, Control, and Targeting Architectures: Theory, Doctrine, and Warfighting Applications,» in Roy Kamphausen and Andrew Scobell (eds.), *Right-Sizing the People's Liberation Army: Exploring the Contours of China's Military* (Carlisle, PA: Strategic Studies Institute, U.S. Army War College, 2007), p. 205.

2 Larry M. Wortzel, «PLA 'Joint' Operational Contingencies in South Asia, Central Asia, and Korea,» in Roy Kamphausen, David Lai and Andrew Scobell (eds.), *Beyond the Strait: PLA Missions other than Taiwan* (Carlisle, PA: Strategic Studies Institute, U.S. Army War College, 2009), pp. 327-328.

Regional War under Informatization Conditions

This concept is not part of the official military terminology of China, which uses instead the term Local War under Informatization Conditions. However, the existing terminology can be used to explore the meaning and implications of the concept, and the two most relevant official terms are Local War under Informatization Conditions and Active Defense strategy. These together with other policies and perceptions prevailing in Chinese military thought, may sketch the general outlines of this type of war.

The first aspects to be explored are the war's geographical scope and strategic goals. The term Local War has replaced the previous concept of Limited War, which referred both to a war's geographical dimension and to its duration and goals. Replacing the term Limited with the term Local, underlines the fact that future wars may not be as limited as previously foreseen, although conducted along China's land or maritime borders. A possible exception is the use of force against non-state rivals such as pirates or terrorists, yet the scope of such an operation will be much narrower than a regional war.

The second aspect to be explored is the war's operational dimension. The dominant concept here is Informatization Conditions, which in 2004 replaced the term High-tech Conditions. As its name indicates, the concept reflects the importance the PLA places on information technology to network its equipment and forces, and simultaneously indicates China's will to close the technological and conceptual gaps between the PLA and the leading world militaries. That goal is also reflected in the frequent use of RMA (Revolution in Military Affairs) and similar terms pervading the U.S. strategic discourse in China's military writings.³ At the same time, the PLA is attempting the mechanization of its forces, a goal defined within the concept of Local War under High-tech Conditions, but has not been completely realized yet.⁴

As for its specific contents, 'informatization' may contain a wide range of technological, organizational and structural meanings. Exploring them is beyond the scope of the paper, yet to analyze China's capability to wage war under informatization conditions, some key elements of the term will be presented. One is the conduct of integrated joint operations, in which at least two, or preferably three services (army, air-force, navy, and ballistic missiles) operate under single command of the War Zone, front, or Army Group headquarters. That requires high-level coordination, development of new fighting concepts and methods, joint training exercises, sophisticated communication devices, inter-service resource sharing, and authority delegation among the services.

Another element is a sophisticated command and control formation that provides commanders at all levels down to the regiment a clear real-time view of the battlefield, and delegates to them direct and comprehensive authority over operations, means and forces operating in the battlefield under their command. To that end headquarters should have access to real-time intelligence and means to analyze and relay it; the ability to detect and handle enemy targets; direct command over various forces of different

3 Richard A. Bitzinger, «China's 'Revolution in Military Affairs': Rhetoric Versus Reality,» *China Brief* 8(5) (February 29, 2008).

4 United States Department of Defense, *Annual Report to Congress: Military Power of the People's Republic of China 2009* (Washington, DC: Office of the U.S. Secretary of Defense, 2009), p. 11.

services, including special forces; as well as constant direct communication with all forces under their command, and with other headquarters. That requires reliable secure communication and imaging satellites, advanced navigation systems, and airborne imaging, communication, radar and electronic warfare systems.

A third element is precise guided weapons (PGW) in all relevant services and for all relevant dimensions of the war, whether ground, air, sea or outer space. To wage a regional war under informatization conditions the PLA should be able to concentrate precise fire against various types of targets in short, middle and long ranges. To that end, the PLA has to assimilate a wide range of state-of-the-art capabilities that include advanced platforms, target designation measures, reliable data link systems, stabilization and fire control systems, and systems of friendly forces identification. All these – and this is critical – should be assimilated not only into elite units but also into the regular forces. Naturally, not all units can be equipped at the same level, yet a regional war would require the participation of numerous units, and thus would test the technological and organizational levels of the PLA as a whole.

Waging a Regional War under Informatization Conditions: Capabilities and Constraints

Clearly, a regional war under informatization conditions requires a wide range of thoroughly integrated technological, doctrinal, operational, and organizational capabilities. To what extent, with which units, and on what operational level does the PLA actually work in this manner? These are questions difficult to explore using academic methodologies and open sources. Yet even with the limited information at hand it can be assessed that despite the PLA's tremendous progress, its current capabilities nonetheless do not allow it to conduct a full scale war under informatization conditions.

The most interesting and revealing evidence comes from the PLA itself. During the last few years official Chinese publications have admitted frequently that "[t]he level of [the PLA's] modernization is incompatible with the demands of winning a local war under informatization conditions [...] This general assessment has been applied specifically to personnel development, training, logistics, and technological levels."⁵ According to the Director of the General Logistics Department, the PLA's logistics modernization level is insufficient to win informatized local wars.⁶ And as stated in a report on a symposium on military management innovation, quoted in the PLA Daily, the participants' general view was that the PLA's modernization level "cannot suit the demand of winning the IT-based local wars..."⁷

Moreover, examination of the PLA's capabilities given the foregoing requirements of regional war under informatization conditions, demonstrates that in each of them wide gaps still exist. To begin with, it seems that despite the PLA's efforts for the last several years, its ambition to implement integrated joint operations "remains largely an aspiration."⁸ While Chinese units at the regimental level can already

5 Dennis Blasko, «The Pentagon-PLA Disconnect: China's Self Assessments of Its Military Capabilities,» *China Brief* 8(14) (July 3, 2008).

6 Ibid.

7 Ibid.

8 *Annual Report to Congress: Military Power of the People's Republic of China 2009*, p. 15.

perform in a combined arms formation (integrated elements of infantry, armor, artillery, engineering, logistics and other ground forces), at no operational level have naval and aerial forces been directly under battlefield commanders. At the most, some selected Group Armies are assigned an army aviation (helicopter) regiment, but no more than that.⁹ Even at the Military Region/War zone level, the air and naval forces operate through air force/navy headquarters. Thus whatever operational cooperation the PLA services conduct, as long as it lacks a formal unified command structure, its fighting conduct cannot be considered joint operations in the full sense of the word.

The PLA's difficulty in conducting joint operations derives not only from organizational constraints but also from insufficient levels of training, technology, and inter-service cooperation. That was evident, for instance, in the Sino-Russian military exercise in August 2005 (Peace Mission 2005), which offered a rare opportunity to watch the PLA in action. Following the joint exercise, Russian observers complained about the PLA's lack of "jointness", its poor communications and the slowness of its tanks.¹⁰ As some of them unofficially reported:

[T]he PLA has little 'joint' capability. Chinese ground and air forces operated largely without coordination. This was not unexpected, despite all the articles published in Chinese military journals about the need to emulate the Americans. The Chinese know that combined operations are more effective... But each of the services jealously guards their independence.¹¹

Certainly since then China has modernized some weapon systems, and, for example, has deployed new battle tanks (Type 98 and Type 99), fighter aircraft (F-10) and naval surface combat vessels (Luyang II class).¹² Yet considering the PLA size, and the extensive technological, structural and bureaucratic efforts required to establish a mature jointness capability, it is hardly possible that the PLA has overcome its problems within less than four years. And indeed, commenting on the PLA's current progress, Xu Min, Deputy Director of the PLA's joint training exercise held on late-2008, said that the PLA is undergoing a transition "from the research-centric stage to the normal test-oriented stage of its modernization."¹³ In other words, the buildup of joint operations capability has not been completed, and at present China probably has only a few experimental units that are partially capable of conducting joint operations.¹⁴

Similar conclusions can be reached about other elements of informatization. Starting with the PLA's command and

9 For example, see: Martin Andrew, «The PLA's Evolving Operational Doctrine: Experiments in Modularity,» *China Brief* 8(5) (March 6, 2008).

10 «The Long March to be a Superpower,» *The Economist*, August 4, 2007, p. 20.

11 «China's Neglected Weakness,» *Strategy Page*, October 25, 2005, in: www.strategypage.com/htmwt/htlead/articles/20051025.aspx

12 United States Department of Defense, *Annual Report to Congress: Military Power of the People's Republic of China 2008* (Washington, DC: Office of the U.S. Secretary of Defense, 2008), pp. 4-5.

13 Quoted in Russell Hsiao, "PLA's 'New Leap Forward' in Information-Centric Command," *China Brief* 8(18) (September 22, 2008).

14 See, for example, Martin Andrew, «Guarding the West: China's New Mechanized Infantry Division,» *China Brief* 7(10) (May 16, 2006).

control capabilities, remarkable progress has been made in the last decade.¹⁵ Yet their buildup is far from complete. For example, its satellites are not equal to American tracking and data relay satellite systems, it still depends on foreign navigation satellites, and the range and operational duration of its AWACS systems are still limited.¹⁶ Obviously China is continuing its strenuous effort to bridge those gaps, if not always successfully. Such is the case with the deployment of an advanced, reliable tracking and data relay satellite system essential for setting up an operational real-time C4ISR capability. However despite China's prolonged, arduous efforts, that goal has not yet been reached. The Dongfanghong-4 communications satellite, designed to meet these requirements, was launched successfully in October 2006 but technical malfunctioning made it totally unusable.¹⁷

The Dongfanghong-4 example appears not to stand alone, and the prevailing view among PLA observers is that it has not yet acquired a comprehensive real-time command and control capability, not to mention C4ISR. This is also the case with PGW, probably found in only a few PLA units, and with other types of advanced equipment. As claimed in 2007 by Andrew Yang, a leading PLA observer, "[t]he only trustworthy thing [the Chinese] have is missiles [...]."¹⁸ Even if this statement undervalues the PLA's capability, whatever progress it has made during the last decade it still does not meet the standard of the world's leading militaries.

China's Future Military Modernization

Considering all the above limitations and the current leadership's lack of operational experience, one may seriously question the PLA's ability to wage a regional war under informatization conditions. However, while China's capability is clearly incomplete, that is also true of most advanced militaries in its surroundings. Actually few militaries in the world possess that capability in its full sense, and even those probably do not comply fully with all the methodological, conceptual and operational requirements of that kind of war.

Hence it is more reasonable to assume that with its clear interest in regional stability and a peaceful image, its strategic concepts of Local War and Active Defense, and its islands of excellence, China possesses a partial capability for regional war under informatization conditions. It is then reasonable to assume that in any future armed conflict, China will: a) not interfere actively in armed conflicts beyond its own territorial claims unless core interests are at stake; b) enter the war with a surprise attack on the understanding that war is unavoidable; c) make every effort to keep the enemy from penetrating its territory; and d) conduct impressive opening moves using highly equipped and trained units.

However, as the war continues China will find it more and more difficult to achieve its goals through its newly acquired informatization means. Instead, it will probably complement these by large-scale mobilization of human and material resources, massive inaccurate fire, including

15 Wartzel, «PLA Command,» p. 212; *Annual Report to Congress: Military Power of the People's Republic of China 2008*, p. 23.

16 Wartzel, «PLA Command,» pp. 208-220; Bitzinger, «China's 'Revolution in Military Affairs'»

17 Wartzel, «PLA Command,» pp. 218; Sinodefence.com, «Dongfanghong 4 Communications Satellite,» in: <http://www.sinodefence.com/space/spacecraft/dongfanghong4.asp>

18 «The Long March to be a Superpower,» p. 22.

missiles, insufficient and inefficient logistic support, by some use of information warfare, and through complementary diplomatic and economic measures.

At the same time China continues to improve its technological, organizational and operational capabilities, narrowing the gap between its declared ambitions and actual capabilities. In fact, according to Chinese sources, China plans to achieve the strategic goal of winning informatized wars not before the mid-21st century.¹⁹ The question is what factors influence its military development.

To analyze those factors systematically, a basic division should be made between exogenous and endogenous ones. In China's case, the former are virtually self-explanatory, while the latter are complicated and therefore are explored here more extensively.

The exogenous conditions include the timing of the war's eruption, its scale, and the enemy's ability to hinder the use of China's newly acquired war doctrines and technologies. In other words, one may reasonably assume that the PLA will be more likely to implement its ambitious war plans some time in the next decade in a relatively small-scale war against an inferior rival. However, that is only part of the picture. Assuming that China has the time to do so, it is not clear whether it will overcome the internal impediments that hinder its military advance. That leads to the set of endogenous variables. Here three major factors should be considered: the availability of a clear and consolidated military doctrine that closely fits both China's strategic objectives and its resources; willingness for close technological and operational cooperation with other countries; and elimination of political and bureaucratic barriers that diminish the control of middle level commanders over means and materiel, limiting their authority to make decisions.

Consolidating a Coherent Military Doctrine

One ongoing hindrance to the PLA's modernization has been its abstract military doctrine so weakly connected to the country's capabilities and threats. This was most clearly evident between the mid-1980s and the late 1990s. China was already free from the Maoist ideological constraints that had blocked its military development earlier, yet lacking a clear threat it had no drive to translate the doctrinal guidelines into structural, operational and technological modifications. Furthermore, without a sense of urgency, the departmentalism, internal politics and even the personal considerations of China's military leaders negatively influenced decisions about the PLA's future directions. Resources were dispersed and wasted, and foreign military concepts often inadequate and irrelevant to China's strategic conditions were adopted. All that ended with the eruption of Sino-American tension in the late 1990s. The Chinese were made to feel helpless when the United States dispatched aircraft carriers to the Taiwan Strait in 1996. They were irritated by the probably accidental bombing of their embassy in Kosovo and by the Cox report to the U.S. Congress (both in 1999), and deeply concerned over the growing popularity of the China Threat theory in Washington. China then at last introduced practical features into its military doctrine and started vigorous implementation. Only then, more than 15

19 «Commentary Expounds on China's Active Defensive Military Strategy.» *Liaowang*, August 19, 2008, in: DIALOG no. 200808191777.1_b310069f0d41f768.

years after launching its modernization process, the PLA gradually began to emerge from its backwardness and to catch up with modern militaries.

However, considering the declining tension between China and Taiwan during recent months, the common understanding of the military doctrine might be at risk and with it the military buildup. And indeed, there are some signs of an internal debate within the Chinese high command over the PLA's future directions. Two main approaches can be identified. The first, probably associated with China's ground forces, claims that the PLA should concentrate on building its core military capabilities in order to defend China's basic interests in and around its territory. By contrast, the second approach claims that China should prepare for a variety of traditional and untraditional security missions, both nearby and far from its borders. Each approach derives from different premises about China's national security, global trends, China's development path, threats facing China and the like. Additionally, each approach suggests a different set of measures to be undertaken. For instance, the first approach, reflected in an article by the deputy commander of Chengdu Military District Group Army, Major-General Zhang Zhaoyin, holds that "the first and foremost thing [the PLA] needs to deal with is the threat that [the] country may be invaded, overthrown or divided..."²⁰ This stand appears less self-evident in present-day China. Probably referring to his opponents, General Zhang added that "as the country faces increasingly diversified security threats, it is easy for people to unconsciously relax core military capacity building and misread the relationship between core military capacity and other capabilities."²¹ With that suggestion he also indicated the proper solution for China's security problems:

Completion of diversified military tasks is a general task for our army for a long period from now. Among diversified military tasks, winning local wars under informatized conditions is still the top priority. If we are able to complete this important task, then other tasks can be completed as a result.²²

General Zhang's order of priorities is obvious, and so are its operational, structural and technological implications. Safeguarding China's land, territorial waters and airspace is prior to safeguarding the oceans, outer space and electromagnetic space. Safeguarding national security is more important than international and regional security cooperation; and safeguarding national survival is preferable to safeguarding national development interests. If the first does not happen, he warned, the internal balance of military development might be undermined and China would be exposed to the hidden intentions of countries such as the U.S. and Japan.²³

By contrast, the complex threats approach maintains that the PLA "must first proactively defend and defuse crises, [and] firmly resolve to stop their outbreak and escalation."²⁴

20 Zhang Zhaoyin, «Make Ceaseless Efforts to Strengthen Core Military Capacity Building – Important Experience from 30 Years of Reform, Opening Up.» *Jiefangjun Bao Online*, December 11, 2008, in: DIALOG 200812111477.1_cab71efc1c2d30f.

21 *Ibid.*

22 *Ibid.*

23 *Ibid.*

24 Chen Hui and Wang Jingguo, «Promoting an Active Defense Military Strategy.» *Liaowang*, August 19, 2008, in: DIALOG 200808191477.1_b310069f0d41f768.

Regarding the order of priorities among the different types of threats, according to Chen Zhou, an expert from the Academy of Military Sciences, “the PLA must respond to traditional security (threats), and at the same time, to non-traditional security (threats).”²⁵ The practical implications are that the development of the navy, air force and ballistic missiles branches takes priority over the development of the army; the militia and the reserve forces are expected to play an important role; and the PLA should implement a peaceful development strategy and enhanced cooperation with other countries.²⁶

Yet while differing on some issues, both approaches appear to take a common stand against a third one that calls for a gigantic investment in building an aircraft carrier navy. The ambition to acquire a Chinese aircraft carrier arises every few years and then is once again set aside for financial and technological reasons. However, as China’s economy continues to grow and the country plays an increasing role in world politics it seems that the idea does not sound as unrealistic as it did ten years ago. Thus after listing all the reasons why China should establish an aircraft carrier navy, an article published in the well connected Hong Kong newspaper *Ta Kung Pao* stated plainly: “China has no reason not to possess aircraft carriers.”²⁷ Yet it is quite clear that concentrating efforts on the aircraft carrier project will draw so great an amount of resources that both building core military capabilities and implementing a peaceful developing strategy will be severely hampered. And indeed, it seems that lobbying for aircraft carriers has not gained enough momentum, at least for now. Speaking to *Xinhua* about the PLAN’s procurement program, its commander-in-chief, Admiral Wu Shengli, listed a handful of sophisticated weapon systems to be procured by the Navy, among them large combat warships, next generation aircraft and high-speed intelligent torpedoes. But aircraft carriers were not part of the list.²⁸ That does not mean that China abandons the idea of having its own aircraft carriers – quite the contrary. It only means that the program will not dominate the PLA’s list of priorities.

Obviously this is just the tip of the iceberg. Even so, assuming that the internal debate over China’s future strategy and procurement continues, this brief overview is enough to suggest that the internal debate over future strategic directions may have negative consequences for China’s military progress.

China’s Self-Reliance Strategy

As mentioned above, the PLA has clearly made significant technological progress. Nonetheless this is not enough, and there are still wide technological and conceptual gaps between its existing and desired capabilities. Bridging these gaps seems to be the PLA’s top priority, and one may claim that considering China’s ambition and its foreign exchange reserves, it is just a matter of time until it is realized. Nevertheless, even if it overcomes the financial constraints – an assumption far from obvious – one barrier is expected to remain valid for long time: its complex dependence on foreign technology. Notwithstanding the

tremendous technological progress that China has made during the last decades, it seems to lack the scientific, technological and engineering capabilities to develop and serially produce the whole range of weapons and equipment that modern armed forces are equipped with. China still depends on foreign suppliers – mainly Russia but also France, Germany and other Western and former Communist bloc countries – for the import of critical technologies for its military. While acknowledging that fact,²⁹ China remains motivated by its self-reliance mentality to a degree that hampers its future development.

To understand it, one does well to observe the experience of other industrialized powers that confronted a similar dilemma. Those countries, among them the leading Western European states, Japan and South Korea, discovered that the development and serial production of cutting edge military systems demand vast resources often beyond the reach of a single country. To overcome that challenge they adopted strategies besides complete self-reliance: cooperation with other leading military producer(s) and specialization in certain systems, sub-systems and technologies. For example, South Korea abandoned its indigenous fighter aircraft project and decided to rely instead on American imports. The leading European countries chose a different approach and have jointly developed several military as well as civilian aircraft.³⁰

China, on the other hand, lacking for the time being the capability to fully equip its forces, still adheres to a radical self-reliance strategy. In so doing it prevents the PLA from acquiring the technologies required to conduct a regional war under informatization conditions. Firstly, no matter how much downsizing the PLA undergoes, it is still a giant military force in which most units still use obsolete weapons. To overcome the problem, China will have to stretch its defense budget to an unbearable extent, or continue with its current approach of focusing on certain units only. As mentioned above, that inflames internal competition among PLA’s arms and branches, a competition that can only get worse if China mobilizes its resources for more ambitious and costly projects. Simultaneously, it will prevent the PLA’s services from aligning and standardizing their technological capabilities, and thus hamper the possibility of joint operations.

Secondly, unlike most world military powers, China has failed to form strong supplier-client relations with a strategic supplier. While relying heavily on Russia for advance military technology, it seems that as China’s military modernization is moving ahead, so are the tension and suspicions between those two powers. Threatened by the growing strength of the PLA and irritated by China’s allegedly unauthorized copy-production of its imported technologies (mainly the Su-27 aircraft), Russia appears not completely convinced that military cooperation with China will serve its long term interests. From the strategic viewpoint, Russian critics claim that China’s military buildup may enable it one day to seize parts of Siberia or the Russian Far East, or may exacerbate the danger to Russia if China’s Communist regime collapses.³¹ From the commercial standpoint there

29 «Commentary Expounds.»

30 For example, the Eurofighter Typhoon was developed by UK, Germany, Italy and Spain; the Mirage F-1 was developed by France and UK; and the Tornado was developed by Germany, United-Kingdom and Italy.

31 The critics are quoted in Alexander Shlyndov, «Military and Technical Collaboration between Russia and China: Its Current Status, Problems, and Outlook,» *Far Eastern Affairs* 33(1) (January-March 2005), pp. 14-15.

25 *Ibid.*

26 *Ibid.*

27 Zhang Jingwei, «China’s Aircraft Carrier Strategy Displays Wisdom,» *Ta Kung Pao*, December 7, 2008, in: DIALOG 200812071477.1_b0890391f161901e.

28 «Navy Admiral: China to Develop Sophisticated Marine Weapon Systems,» *Xinhua*, April 15, 2009, in: http://news.xinhuanet.com/english/2009-04/15/content_11191749.htm

are reports that “[R]ussian dealers... are upset about blatant Chinese imitations of their products, built from designs supplied in the understanding that the new weapons were to be purchased.” These and other complaints caused Russia to postpone its aircraft shipments to China, an incident that aroused mutual accusations.³²

Bearing in mind that the military talks between the two allies had already run into difficulties over these issues,³³ it is not clear to what extent China can depend on Moscow for its future military modernization. And without Russia, it is questionable to what degree China will be able to advance that process.

Cooperation and Organizational Adjustments inside the PLA

Perhaps the least clearly defined impediment to China's implementation of Regional War under Informatization Conditions derives from the structural and political characteristics of that war. Since joint operations are of the essence here, a war under informatization conditions requires the military services and branches to undertake profound structural readjustments that enable them to share resources, communicate and coordinate in complete harmony. The PLA knows this well and consequently increases its training and exercises, but that is not enough. A war under informatization conditions requires the allocation of different units and different means under a unified command with the authority to make real-time decisions in its battle zone. To this end certain conditions must be met.

Besides conducting joint exercises the PLA should undertake additional measures such as in certain cases dividing the responsibilities for force buildup and force operation, adopting similar standards and terms in all services, putting resource sharing mechanisms in place, and formulating comprehensive measures, methodologies and procedures for relaying information between arms and services. All these require profound structural modifications that may challenge ingrained habits, bureaucratic interests and personal ambitions. The question is whether the PLA can undertake those changes despite the anticipated resistance: the answer, as in the case of the doctrine consolidation, partly depends on the emergence of a clear threat to China's interests.

Another condition is the willingness of China's top civilian and military leadership to delegate decision-making and direct control over means and information to PLA commanders down to the regimental level. Of all the factors and preconditions the paper presents, that one is probably the most obscure and the one on which reliable data is most difficult to obtain, despite its high importance.

As already mentioned, the informatized battlefield is provided with advanced means that give field commanders access to real-time intelligence and powerful precise firepower. Forces can then adjust their tactics and operations to different kinds of enemies (regular and guerrilla-type, military and civilian), different environments of open country and urban areas, and different dimensions – ground, air, sea, outer space and cyberspace. However, possessing the technologies without the authority to operate them makes them inadequate. Due to the dynamic nature of contemporary wars the battlefield can

become highly complicated, and in such circumstances commanders should react rapidly and flexibly. That cannot be done without a direct command authority over the battle equipment and forces and without direct access to intelligence information.

The question is how broad is the command authority of Chinese commanders from the regiment to the Group Army levels. Clearly, the issue is complex, partly because its empirical dimension is limited. Therefore all that can be said at this preliminary stage is that given the basic characteristics and past experience of the Chinese regime it is highly questionable whether the PLA commanders possess the required level of authority and access to intelligence information and operational means. However that presumption is but a starting point for a deeper inquiry that requires systematic methodology, clear parameters and additional data collecting.

Conclusion

According to the data and information at hand, during the next several years China will not be able to wage a full scale war under informatization conditions. To begin with, despite the tremendous technological leap of the PLA during the last decade, it is probably still beyond China's capacity and will to equip its entire military forces with state-of-the-art weapons and equipment. Furthermore, even if the technological level reaches the minimal standard that such a war requires, it is plausible that the Chinese military leadership will find it difficult for both bureaucratic and political reasons to undertake the full set of organizational and structural adjustments that such a war demands. That does not mean that the PLA is standing still. With its growing elite forces and expanding islands of technological excellence its operational performances are better than ever, and it can operate in a more destructive, coordinated and deterring fashion than ever before.

Nonetheless a gap between those capabilities and a full scale informatized war still exists, and the extent to which China will be able to bridge it depends on six variables, three exogenous and three endogenous. Exogenous variables include the timing of the war, its scale and the rival force's capabilities. The longer China can prepare, the more limited the war is, and the less sophisticated the enemies are, the more capable the PLA will be of conducting a regional war under informatization conditions.

Regarding the other set of variables, what determines China's competence to wage such a war is consolidating a systematic military doctrine that consists of a clear and consensual threat perception, adopting a procurement policy that acknowledges China's financial and technological limitations, and overcoming the bureaucratic and political barriers that prevent the PLA from undertaking the structural adjustments that its doctrine demands. As for the last factor, it seems that despite its prime importance it has received the least attention hitherto – a lacuna that may point at future research directions.

32 Andrei Chang, «Sino-Russia Military Ties,» *Space War*, August 24, 2007, in: www.spacewar.com/reports/Analysis_Sino-Russia_military_ties_999.html

33 Ibid.